

IN THE CLAIMS:

Amendments to the Claims

Please cancel claims 1-7 without prejudice or disclaimer of the subject matter thereof, and amend claims 8 and 9 as shown below.

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-7 (canceled)

8. (currently amended) A plasma processing method using a plasma processing apparatus having:

- a process chamber in which a substrate is subjected to a plasma processing;
- a light-receiving part for monitoring a plasma emission in the process chamber;

- a spectrometer unit for performing a spectrometry on the received plasma emission to convert the same into a multi-channel signal;

- an arithmetic unit for converting the multi-channel signal into one or more output signals and performing an arithmetic operation on the output signals;

- a database for storing a filter vector;

- a determination unit for determining a condition in the process chamber based on a result of the arithmetic operation; and

- an apparatus controller for controlling an operation of the plasma processing apparatus in response to a signal from the determination unit,

- the method comprising:

a step of converting the multi-channel signal output from the spectrometer unit into a batch of output signals;

a step of finding differences between the output signals and output signals of ~~the~~a preceding batch; and

a step of comparing an average value of the differences in one batch, a difference between a maximum and a minimum of the differences in one batch and a standard deviation of the differences in one batch with a preset threshold.

9. (currently amended) A plasma processing method using a plasma processing apparatus having:

a process chamber in which a substrate is subjected to a plasma processing;

a light-receiving part for monitoring a plasma emission in the process chamber;

a spectrometer unit for performing a spectrometry on the received plasma emission to convert the same into a multi-channel signal;

an arithmetic unit for converting the multi-channel signal into one or more output signals and performing an arithmetic operation on the output signals;

a database for storing a filter vector;

a determination unit for determining a condition in the process chamber based on a result of the arithmetic operation; and

an apparatus controller for controlling an operation of the plasma processing apparatus in response to a signal from the determination unit,

the method comprising:

a step of performing evacuation after a wet cleaning;

a step of automatically determining whether a degree of vacuum is adequate or not;

a step of automatically determining whether there is an apparatus abnormality or not;

a step of converting the multi-channel signal output from the spectrometer unit into a batch of output signals;

a step of finding differences between the output signals and output signals of the a preceding batch; and

a step of comparing an average value of the differences in one batch, a difference between a maximum and a minimum of the differences in one batch and a standard deviation of the differences in one batch with a preset threshold.